TA-AX230/AX235/AX4060

SERVICE MANUAL

TA-AX230:

AEP Model
G-AEP Model
UK Model
AUS Model

AEP Model
UK Model

G-AEP Model

PHOTO : TA-AX230

SPECIFICATIONS

Amplifier section

Continuous RMS power output
(both cannels driven
simultaneously) At 1 kHz, 5% THD
40 + 40 watts (8 ohms)
At 1 kHz, 0.08% THD
35 + 35 watts (8 ohms)
At 40 kHz – 20 kHz, 0.08% THD
30 + 30 watts (8 ohms)
Peak music power output (Type 3)
300 W (8 ohms, 5% THD)
Music power output (Type 3)
150 W (8 ohms, 5% THD)
Power bandwidth (IHF)
20 Hz – 30 kHz (8 ohms, 25 W)
Dynamic headroom
1.2 dB ('78 IHF)
Harmonic distortion
Less than 0.08% at rated output distortion
Intermodulation Less than 0.08% at rated output
(IF) (60 Hz: 7 kHz = 4:1)
Frequency response
PHONO: RIAA equalization curve ± 0.5 dB
TUNER/CD/VIDEO/TAPE
TA-AX230: 16 Hz – 70 kHz ± 3.0 dB
TA-AX235/AX4060: 15 Hz – 70 kHz ± 3.0 dB
Recidual noise Less than 100 μV (8 ohms, network A)
Damping factor 36 (8 ohms, 1 kHz)

Input

	Sensitivity	Impedance
PHONO	2.0 mV	50 kohms
TUNER CD VIDEO TAPE	150 mV	50 kohms

Outputs RECOUT
Voltage 150 mV
Impedance 470 ohms
SPEAKER
Accepts speakers of 8 – 16 ohms
HEADPHONES
Accepts low and high impedance
headphones

—Continued on Page 2—

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

INTEGRATED STEREO AMPLIFIER

SONY®

AUD

Graphic equalizer 100 Hz: ± 10 dB
400 Hz: ± 10 dB
1 kHz: ± 10 dB
4 kHz: ± 10 dB
12 kHz: ± 7 dB

General

System Preamplifier section: low-noise IC NF type equalizer amplifier
Power amplifier section: quasi-complementary SEPP OTL OCL power amplifier with all stages direct coupled

Power requirements
AEP G-AEP MODEL: 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50/60 Hz
UK, AUS MODEL: 240 V ac (or 220 V ac adjustable by authorized Sony personnel), 50/60 Hz

Power consumption
TA-AX230: AEP,G-AEP/AX-4060:75W
TA-AX230: UK, AUS: 175 W
TA-AX235: AEP: 95 W
TA-AX235: UK: 195 W

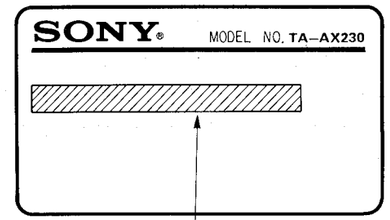
AC outlets TA-AX230/AX4060: 3 switched total 100 watts max.

Dimensions TA-AX230: AEP ,G-AEP,UK/AX-4060:
Approx. 430 x 105 x 255 mm
(17 1/8 x 4 1/4 x 10 1/8 inches)
TA-AX230: AUS/AX235:
Approx. 430 x 105 x 250 mm
(17 1/8 x 4 1/4 x 9 1/8 inches)

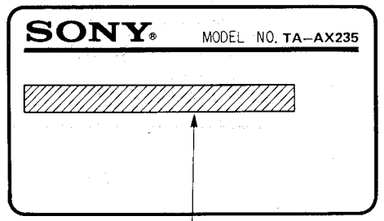
Weight TA-AX230/AX4060: Approx. 4.5 kg (9 ibs 15 oz) net
TA-AX235: Approx. 5.0 kg(11 lb) net

MODEL IDENTIFICATION

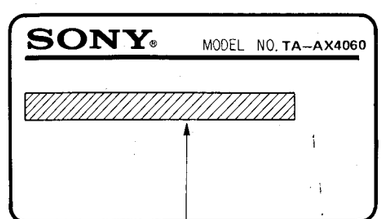
— Specification Label —



TA-AX230:
AEP model: AC 220V ~ 50/60Hz 75W
UK model: AC 240V ~ 50/60Hz 175W
G-AEP model: AC 220V ~ 50/60Hz 75W
AUS model: AC 240V ~ 50/60Hz 175W



TA-AX235:
AEP model: AC 220V ~ 50/60Hz 95W
UK model: AC 240V ~ 50/60Hz 195W

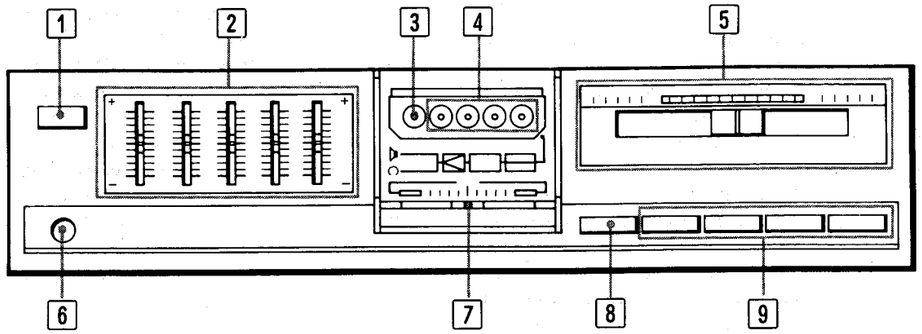


TA-AX4060:
G-AEP model: AC 220V ~ 50/60Hz 75W

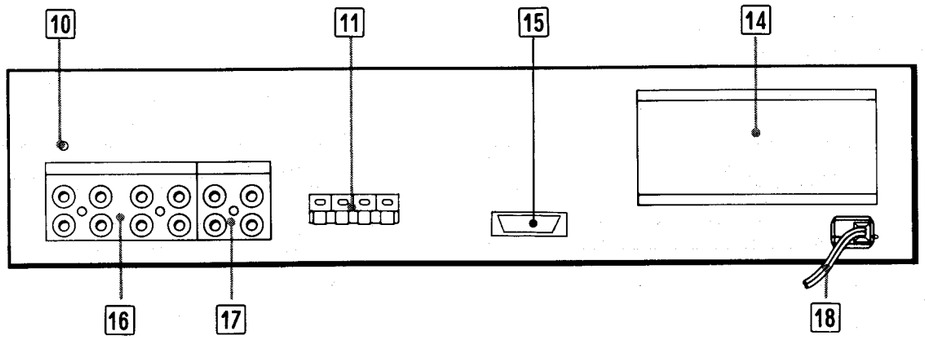
SECTION 1
OUTLINE

1-1. FUNCTION OF CONTROL

Front panel



Rear panel



FRONT PANEL

1 POWER switch
Turns the operating power on or off.

2 GRAPHIC EQUALIZER controls
To equalize the listening sound, slide each control upwards to increase the level of the frequency band, and downwards to decrease the level.

100 Hz: Use to boost or cut the bass.
400 Hz: Use to adjust the middle frequency range.
1 kHz: Use to provide more presence of vocals.
4 kHz: Use to adjust the brightness of sound.
12 kHz: This control effects general treble. Slide downwards to reduce high frequency noise, such as tape his hiss.

To record or listen to the sound with the original tone quality, set all the controls at their center positions.

3 TAPE indicator
Lights up when the MONITOR TAPE button is depressed.

4 FUNCTION display
Shows the audio input source in use when the appropriate button is depressed.

5 VOLUME control and indicator
Adjusts the sound level.

6 HEADPHONES jack (stereo phone jack)
The headphone volume can be adjusted with the VOLUME control.
sound from the speaker will be cut off when a plug is inserted to this jack.

7 BALANCE control
Adjusts the balance of the left and right channel output level.

8 MONITOR TAPE button
For listening to a taped program.

9 FUNCTION buttons
VIDEO: For listening to or recording the sound from the video equipment or an auxiliary programs (connected to VIDEO inputs).
CD: For listening to or recording the compact disc programs.
TUNER: For listening to or recording radio programs.
PHONO: For listening to or recording disc programs.

REAR PANEL

10 Ground terminal (⏚)
To prevent hum, be sure to connect the ground wire of the turntable system.

11 SPEAKER connector

14 AC OUTLETS (TA-AX230: AEP, G-AEP, UK/AX4060 only)

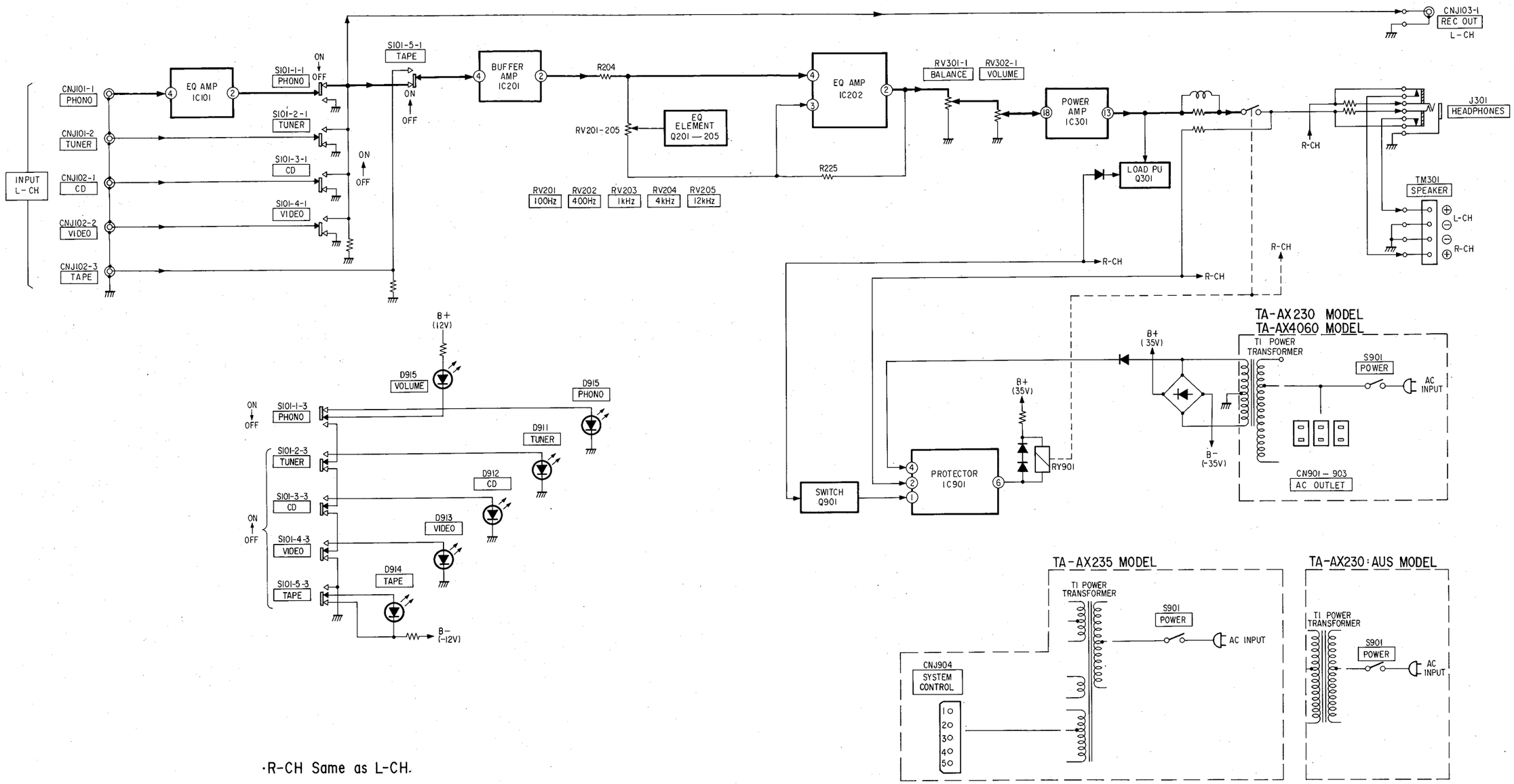
15 SYSTEM CONTROL connector (TA-AX235 only)

16 INPUT jacks (phono jack)
PHONO: Accept the outputs of a turntable system.
TUNER: Accept the outputs of a tuner.
CD: Accept the outputs of a CD player.
VIDEO: Accept the audio outputs of a video recorder.

17 TAPE RECORDER jacks (phono jack)
REC OUT: For recording a program source connected to the amplifier.
TAPE: For monitoring a taped program.

18 Power cord

1-2. BLOCK DIAGRAM

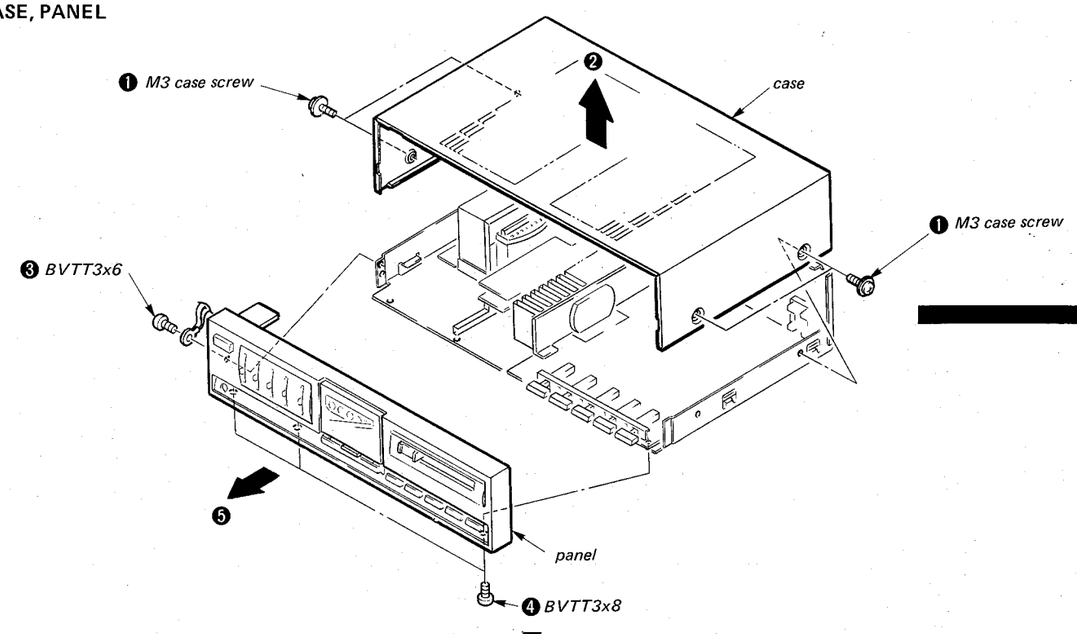


·R-CH Same as L-CH.

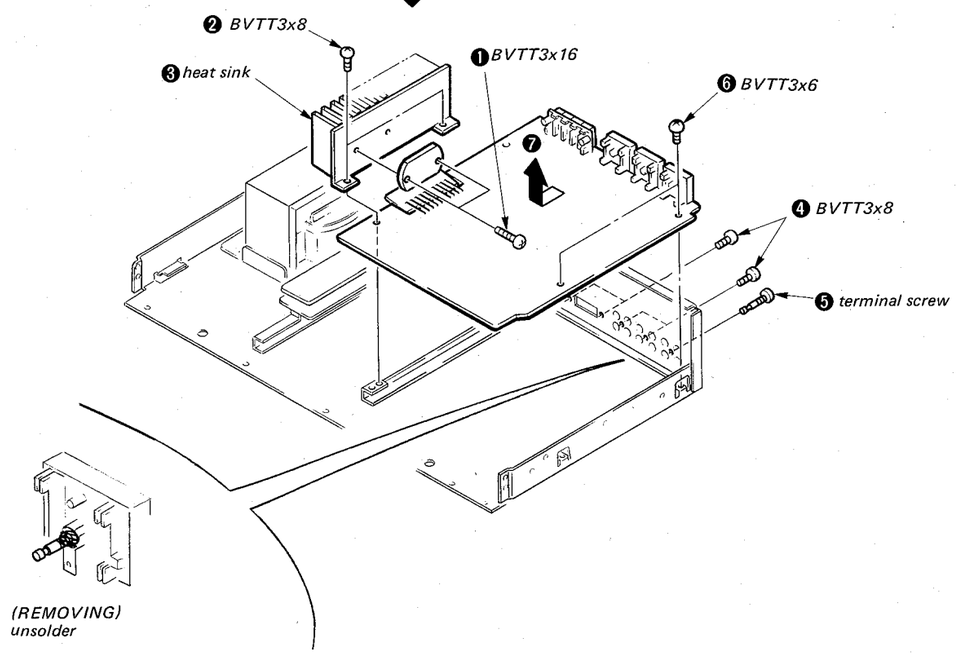
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

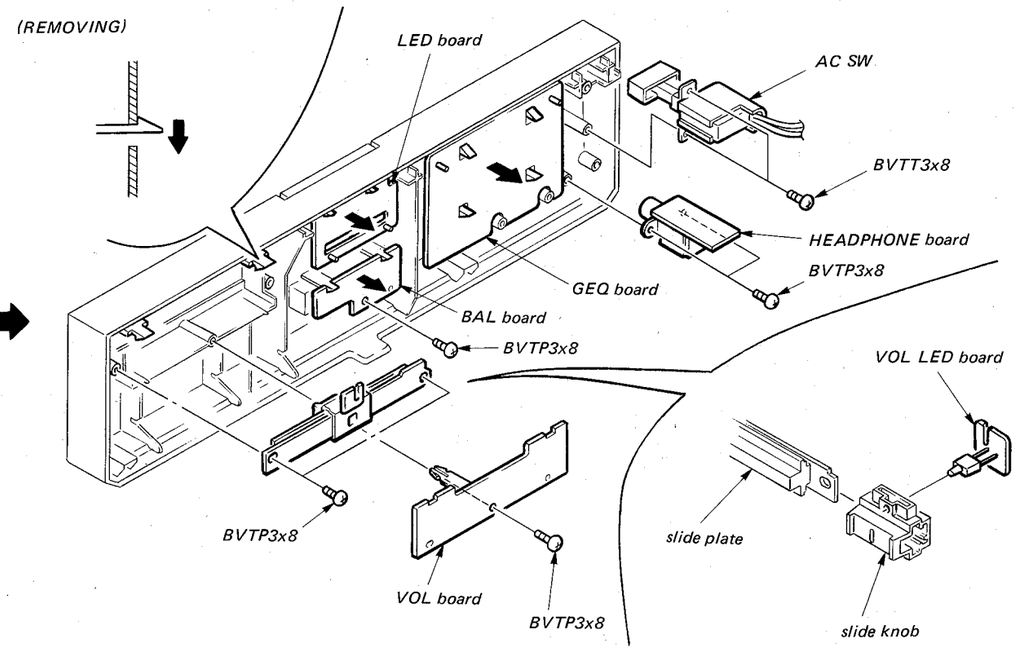
CASE, PANEL



HEAT SINK, MAIN BOARD



HEADPHONE, GEQ, LED, BAL, VOL, VOL LED BOARD AND AC SW



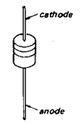
SECTION 3
DIAGRAMS

3-1. MOUNTING DIAGRAM

- **Semiconductor Lead Layouts**

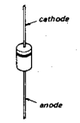
μPC1237H

1SS202-1

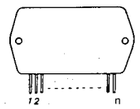


μPC4570HA

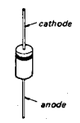
30D2-FC



STK4151V

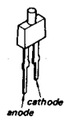


EQA01-12R1 10E2N



2SC1841-PA

LT2G5A



2SC2603-F
DTA124ES

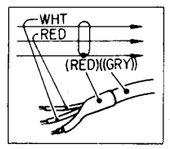
SEL2410GW-C

- **Semiconductor Location**

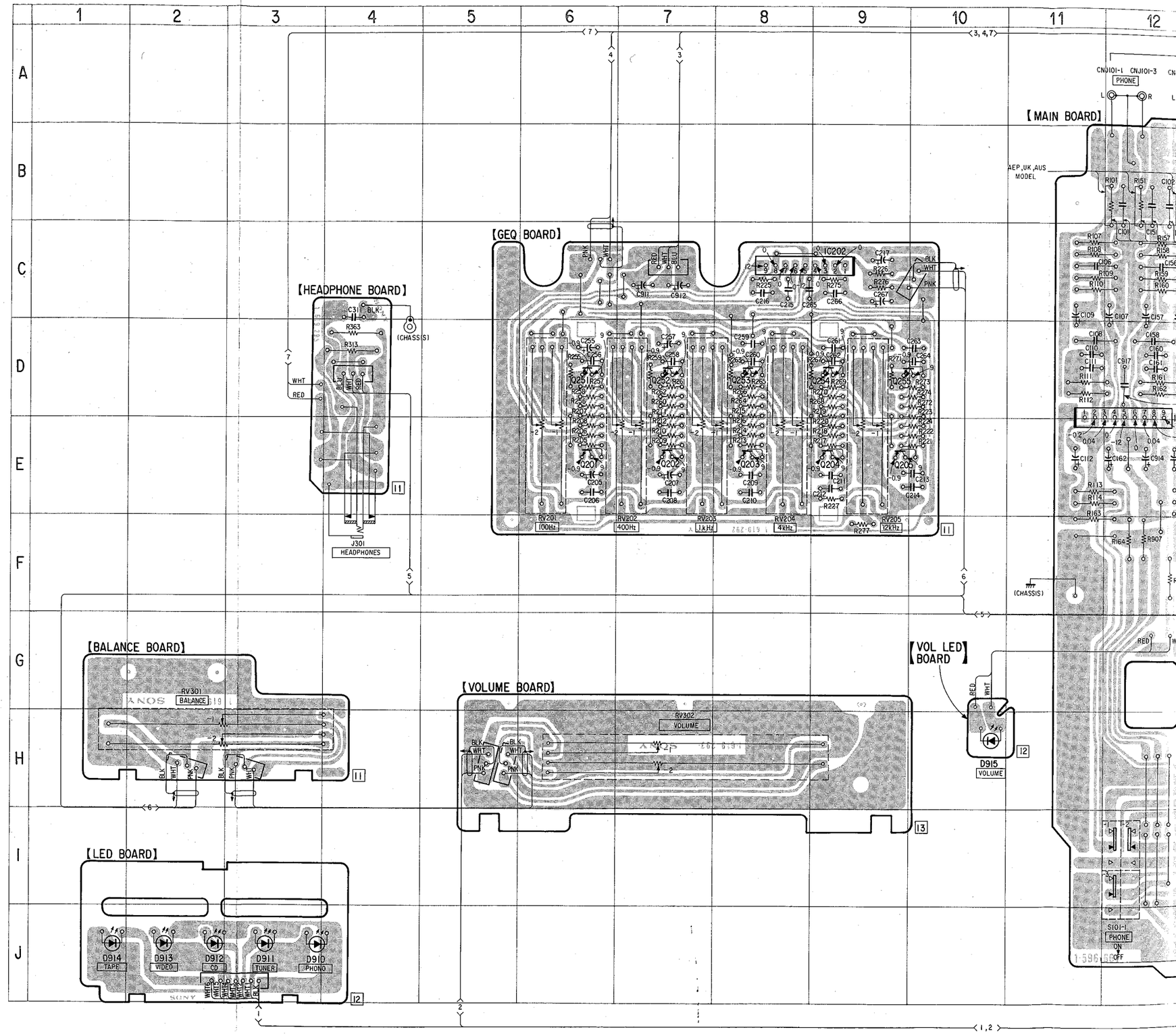
Ref.No.	Location	Ref.No.	Location
D301	G-16	IC101	D-12
D302	G-17	IC201	I-17
D351	G-16	IC202	C-8
D352	G-17	IC301	F-19
D901	C-18	IC901	E-15
D902	D-18		
		Q201	E-6
D903	D-18	Q202	E-7
D904	D-18	Q203	E-8
D905	D-15		
		Q204	E-9
D906	D-15	Q205	E-9
D907	E-17	Q251	D-6
D908	G-15		
		Q252	D-7
D909	G-15	Q253	D-8
D910	J-3	Q254	D-9
D911	J-3		
		Q255	D-9
D912	J-2	Q301	H-17
D913	J-2	Q351	H-16
D914	J-1	Q901	F-15
D915	H-10		

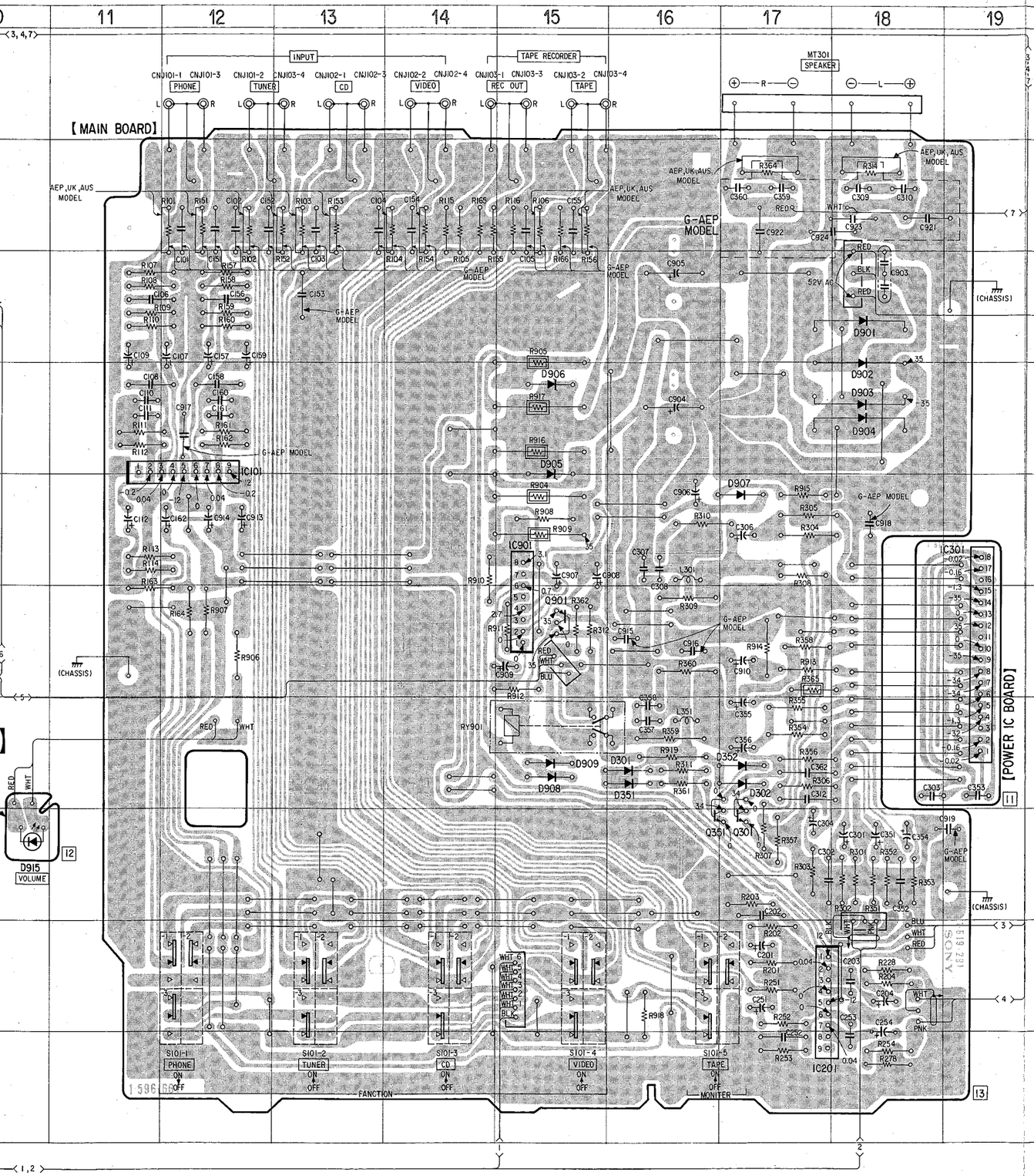
Note:

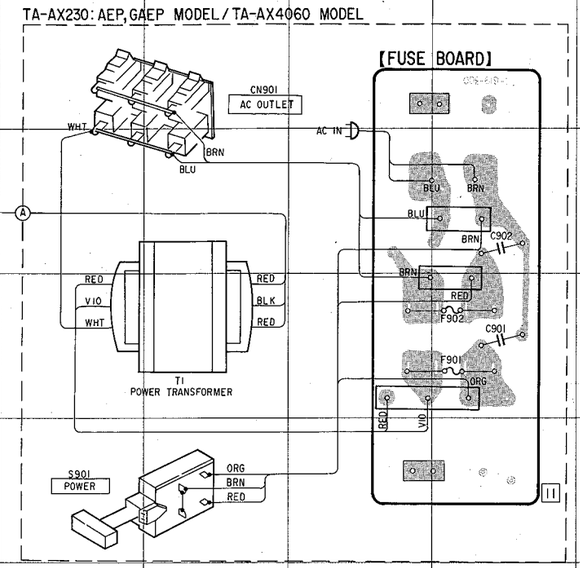
- Color code of sleeving over the end of the jacket.

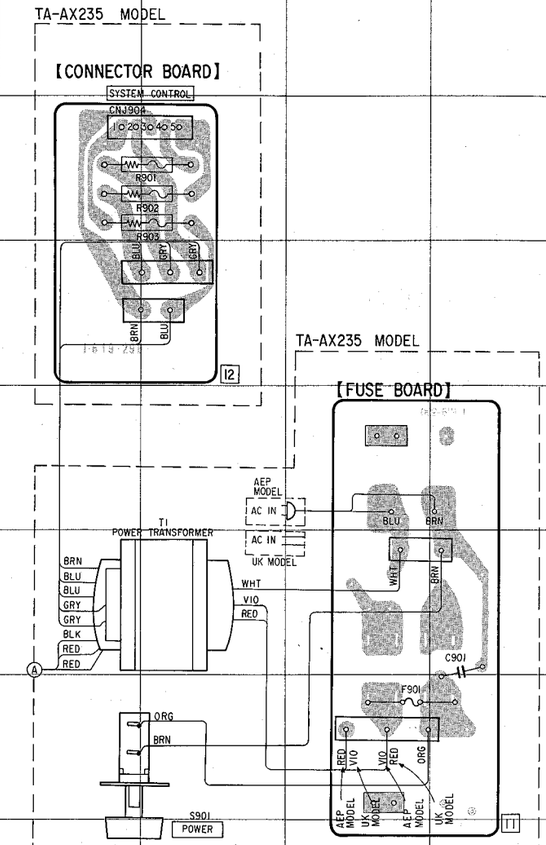


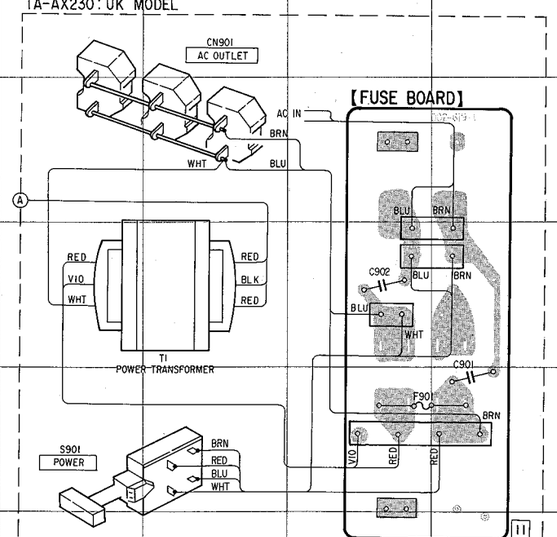
- ○—— : parts extracted from the component side.

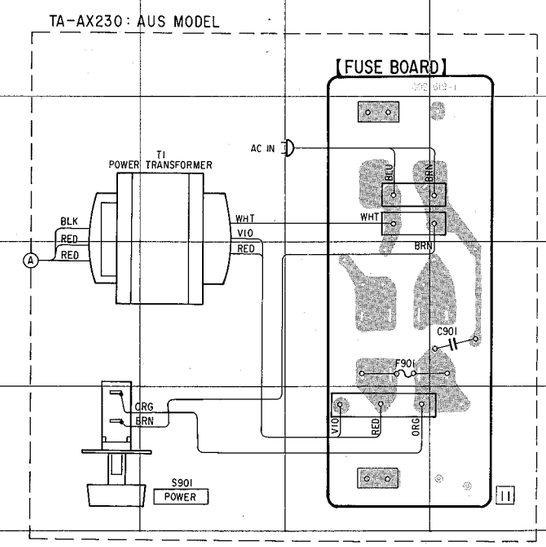



【MAIN BOARD】
INPUT
PHONE
TUNER
CD
VIDEO
TAPE RECORDER
REC OUT
TAPE
MT301
SPEAKER
AEP,UK,AUS MODEL
G-AEP MODEL
(CHASSIS)
【POWER IC BOARD】
D915
VOLUME
SIOI-1 PHONE
SIOI-2 TUNER
SIOI-3 CD
SIOI-4 VIDEO
SIOI-5 TAPE
FANCTION
MONITOR
IC201
IC301
Q901
Q301
Q351
RY901
D901
D902
D903
D904
D905
D906
D907
D908
D909
D301
D351
D352
SONY

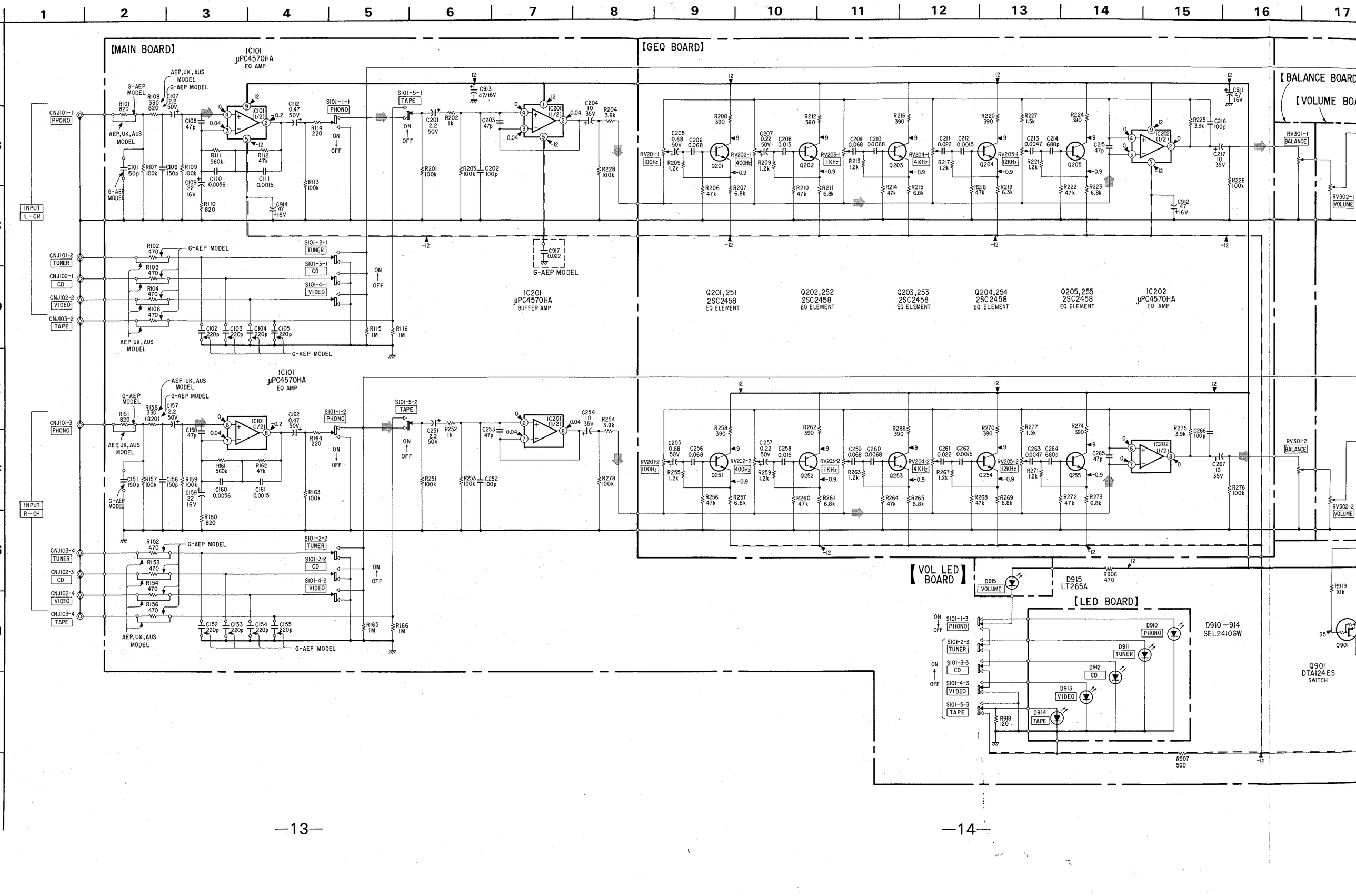

TA-AX230: AEP, GAEP MODEL / TA-AX4060 MODEL
【FUSE BOARD】
CN901
AC OUTLET
AC IN
T1
POWER TRANSFORMER
S901
POWER

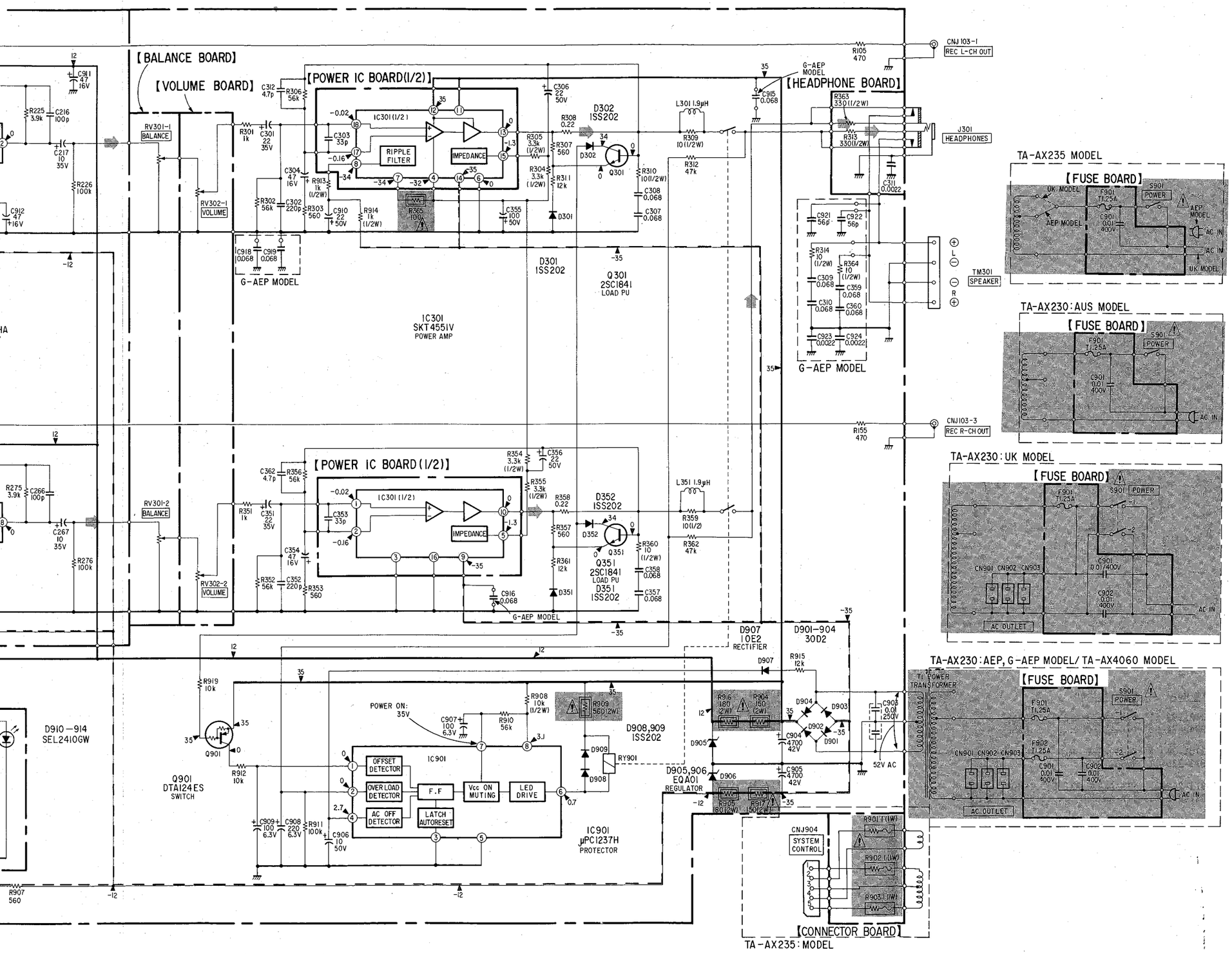

TA-AX235 MODEL
【CONNECTOR BOARD】
SYSTEM CONTROL
CNJ908
【FUSE BOARD】
AEP MODEL
UK MODEL
T1
POWER TRANSFORMER
S901
POWER


TA-AX230: UK MODEL
CN901
AC OUTLET
【FUSE BOARD】
T1
POWER TRANSFORMER
S901
POWER


TA-AX230: AUS MODEL
【FUSE BOARD】
T1
POWER TRANSFORMER
AC IN
S901
POWER

3-2. SCHEMATIC DIAGRAM





Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ⇨ : signal path.
- ⊟ : nonflammable resistor.
- ⊟ : fusible resistor.
- ▬▬ : B+ bus.
- ▬▬ : B− bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  no mark: PHONO
- Switch

Ref. No.	Switch	Position
S301-1	PHONO	ON
S301-2	TUNER	OFF
S301-3	CD	OFF
S301-4	VIDEO	OFF
S301-5	TAPE	OFF
S901	POWER	OFF

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 4
EXPLODED VIEWS AND PARTS LIST

NOTE:

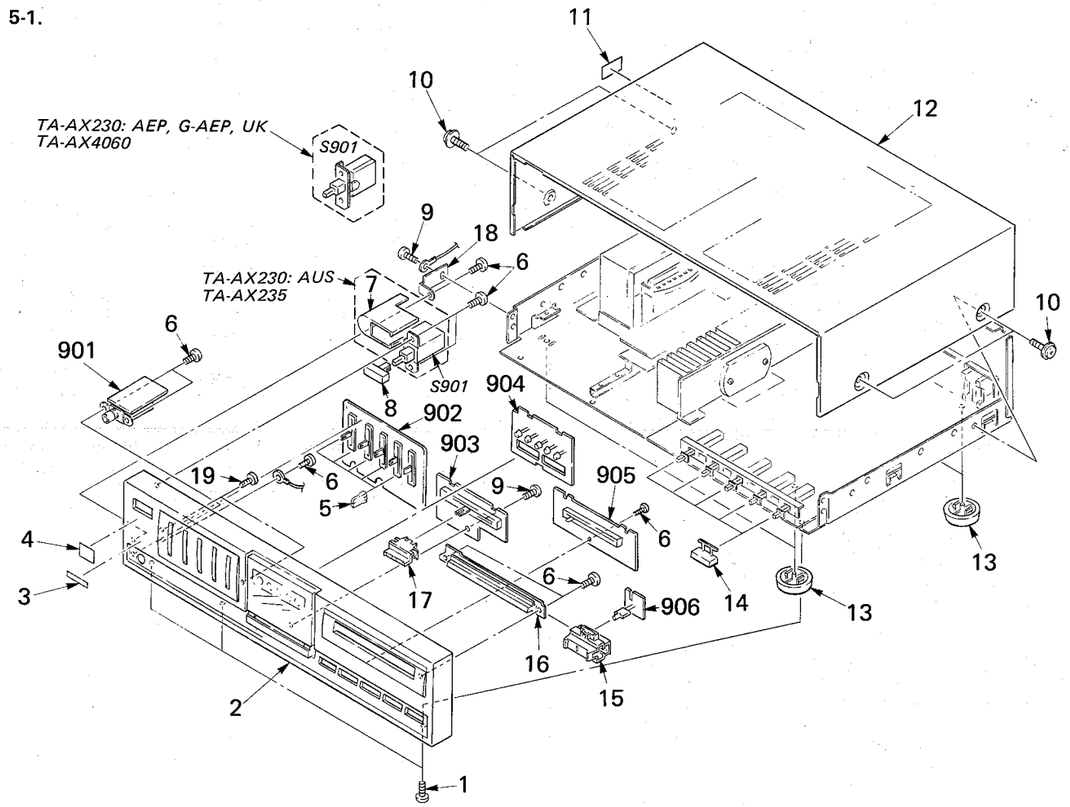
The mechanical parts with no reference number in the exploded views are not supplied.

· Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

· The construction parts of an assembled part are indicated with a collation number in the remark column.

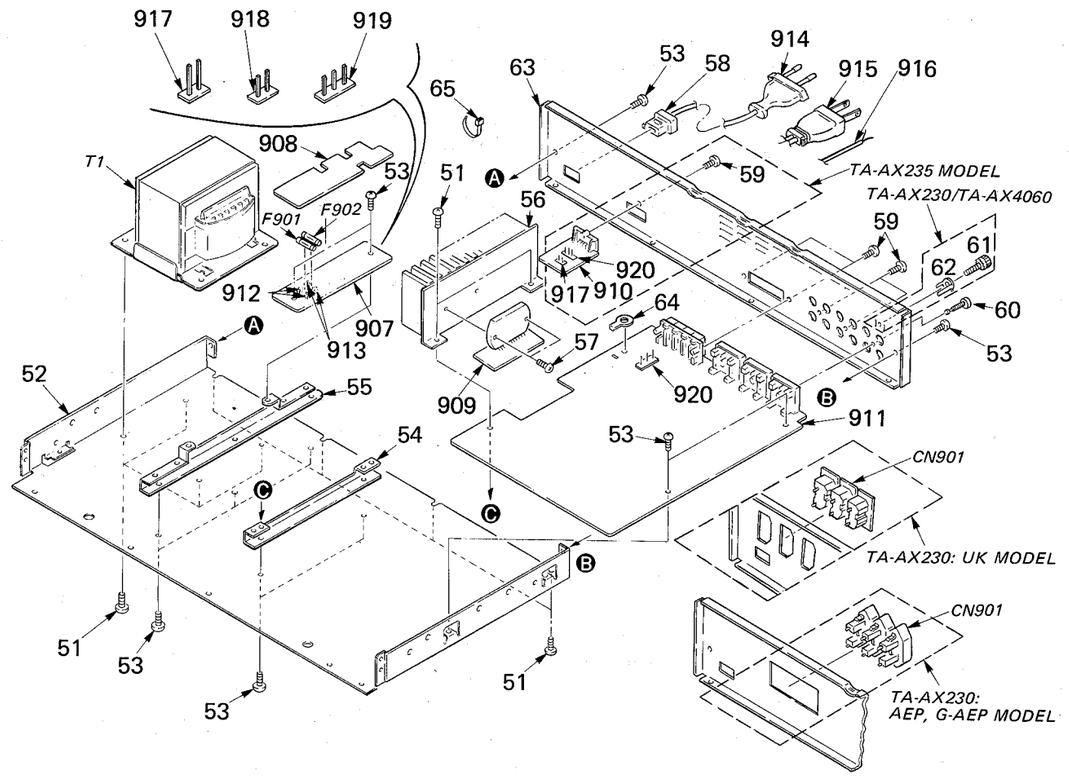
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-1.



No.	Part No.	Description	Remarks
1	7-685-752-04	SCREW +BVTT 3X8 (S)	
2	X-4904-457-1	(TA-AX230)....PANEL ASSY	19
	X-4904-460-1	(TA-AX235)....PANEL ASSY	19
	X-4904-464-1	(TA-AX4060)...PANEL ASSY	19
3	3-701-690-01	(AUS)....LABLE (MADE IN JAPAN)	
4	3-703-713-41	(TA-AX230/AX4060) ...STICKER, SONY SYMBOL (10)	
5	4-911-230-11	(TA-AX230/AX235)...KNOB, SLIDE	
6	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
7	3-575-524-02	(TA-AX230:AUS/AX235)..COVER, POWER SWITCH	
8	3-332-417-11	(TA-AX230/AX235)...KNOB (POWER), PUSH	
	3-332-417-31	(TA-AX4060).....KNOB (POWER), PUSH	
9	7-685-871-01	SCREW +BVTT 3X6 (S)	
10	4-886-821-01	SCREW, M3 CASE	
11	3-703-079-21	(UK)...LABEL, CAUTION (BACK)	
12	3-318-998-51	(TA-AX230/AX235)...CASE	
	4-904-474-91	(TA-AX4060).....CASE	
13	X-3701-069-0	FOOT ASSY, M.F	
14	4-911-235-01	KNOB, PUSH	
15	4-911-242-01	(TA-AX230/AX235)...KNOB, SLIDE	
	4-911-242-11	(TA-AX4060).....KNOB, SLIDE	
16	4-911-241-01	PLATE, SLIDE	
17	3-679-808-21	KNOB, SLIDE	
18	*4-904-476-01	BRACKET	
19	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	
901	*1-619-295-11	PC BOARD, HEADPHONE	
902	*1-619-292-11	PC BOARD, GEQ	
903	*1-619-294-11	PC BOARD, BAL	
904	*1-619-298-12	PC BOARD, LED	
905	*1-619-293-13	PC BOARD, VOL	
906	*1-619-299-12	PC BOARD, VOL LED	

5-2.



No.	Part No.	Description	Remarks
51	7-685-752-04	SCREW +BVTT 3X8 (S)	
52	*4-904-481-61	CHASSIS	
53	7-685-871-01	SCREW +BVTT 3X6 (S)	
54	*4-911-229-01	FRAME	
55	*4-904-480-01	FRAME (C), CENTER	
56	*4-904-477-01	HEAT SINK	
57	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3	
58	3-703-244-00	BUSHING (2104), CORD	
59	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
60	3-703-473-00	(TA-AX230/AX4060)...SCREW, TERMINAL	
61	3-706-165-00	(TA-AX230/AX4060)...SCREW	
62	3-701-993-00	(TA-AX230/AX4060)...SPACER, TERMINAL	
63	*4-911-216-11	(TA-AX235:AEP).....PLATE, JACK	
	*4-911-216-31	(TA-AX235:UK).....PLATE, JACK	
	*4-911-217-11	(TA-AX230:AEP).....PLATE, JACK	
	*4-911-217-21	(TA-AX230:G-AEP)...PLATE, JACK	
	*4-911-217-31	(TA-AX230:UK).....PLATE, JACK	
	*4-911-217-41	(TA-AX4060).....PLATE, JACK	
	*4-911-217-51	(TA-AX230:AUS).....PLATE, JACK	
64	4-870-539-00	PLATE, GROUND	
65	*3-683-631-01	CLAMP	
907	*1-619-300-11	PC BOARD, FUSE	
908	*1-619-301-12	PC BOARD, FUSE COVER	
909	*1-619-297-11	PC BOARD, IC	
910	*1-619-296-12	(TA-AX235)...PC BOARD, CONNECTOR	
911	*A-4388-547-A	(AEP,UK,AUS)...MOUNTED PCB, MAIN	
	*A-4388-548-A	(G-AEP).....MOUNTED PCB, MAIN	
912	1-533-183-11	HOLDER, FUSE	
913	1-533-183-11	(TA-AX230:AEP,G-AEP/AX4060)..HOLDER, FUSE	
914	⚠1-534-817-XX	(TA-AX230:AEP,G-AEP/AX235:AEP/AX4060) ...CORD, POWER, EULO PLUG	
915	⚠1-551-732-00	(TA-AX230:AUS)...CORD, POWER	
916	⚠1-551-884-00	(TA-AX230:UK)....CORD, POWER	
917	*1-535-115-00	TERMINAL	
918	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
919	*1-535-140-00	BASE POST 19MM (10MM PITCH) 3P	
920	*1-535-116-00	TERMINAL	
F901	⚠1-532-285-00	FUSE, TIME-LAG	
F902	⚠1-532-285-00	(TA-AX230:AEP,G-AEP/AX4060)..FUSE, TIME-LAG	
T1	⚠1-448-479-11	(TA-AX230/AX4060)...TRANSFORMER, POWER	
T1	⚠1-448-480-11	(TA-AX235).....TRANSFORMER, POWER	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
· All resistors are in ohms.
· F : nonflammable

COILS
· MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*1-619-295-11	PC BOARD, HEADPHONE
902	*1-619-292-11	PC BOARD, GEQ
903	*1-619-294-11	PC BOARD, BAL
904	*1-619-298-12	PC BOARD, LED
905	*1-619-293-13	PC BOARD, VOL
906	*1-619-299-12	PC BOARD, VOL LED
907	*1-619-300-11	PC BOARD, FUSE
908	*1-619-301-12	PC BOARD, FUSE COVER
909	*1-619-297-11	PC BOARD, IC
910	*1-619-296-12	(TA-AX235)...PC BOARD, CONNECTOR
911	*A-4388-547-A	(AEP,UK,AUS)...MOUNTED PCB, MAIN
	*A-4388-548-A	(G-AEP).....MOUNTED PCB, MAIN
912	1-533-183-11	HOLDER, FUSE
913	1-533-183-11	(TA-AX230:AEP,G-AEP/AX4060) ...HOLDER, FUSE
914	⚠1-534-817-XX	(TA-AX230:AEP,G-AEP/AX235:AEP/AX4060) ...CORD, POWER, EULO PLUG
915	⚠1-551-732-00	(TA-AX230:AUS)...CORD, POWER
916	⚠1-551-884-00	(TA-AX230:UK)....CORD, POWER
917	*1-535-115-00	TERMINAL
918	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P
919	*1-535-140-00	BASE POST 19MM (10MM PITCH) 3P
920	*1-535-116-00	TERMINAL
921	*1-562-327-00	SOCKET, CONNECTOR 3P

C101	1-161-313-00	(G-AEP)...CERAMIC	150PF	10%	50V	
C102	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C103	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C104	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C105	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C106	1-161-313-00	CERAMIC	150PF	10%	50V	
C107	1-123-612-00	ELECT	2.2MF	20%	50V	
C108	1-161-267-00	CERAMIC	47PF	5%	50V	
C109	1-123-330-00	ELECT	22MF	20%	16V	
C110	1-106-190-00	MYLAR	0.0056MF	5%	50V	
C111	1-106-176-00	MYLAR	0.0015MF	5%	50V	
C112	1-123-379-00	ELECT	0.47MF	20%	50V	
C151	1-161-313-00	(G-AEP)...CERAMIC	150PF	10%	50V	
C152	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C153	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C154	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C155	1-161-315-00	(G-AEP)...CERAMIC	220PF	10%	50V	
C156	1-161-313-00	CERAMIC	150PF	10%	50V	
C157	1-123-612-00	ELECT	2.2MF	20%	50V	
C158	1-161-267-00	CERAMIC	47PF	5%	50V	
C159	1-123-330-00	ELECT	22MF	20%	16V	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C160	1-106-190-00	MYLAR	0.0056MF	5%	50V
C161	1-106-176-00	MYLAR	0.0015MF	5%	50V
C162	1-123-379-00	ELECT	0.47MF	20%	50V
C201	1-123-612-00	ELECT	2.2MF	20%	50V
C202	1-162-037-00	CERAMIC	100PF	5%	50V
C203	1-101-880-00	CERAMIC	47PF	5%	50V
C204	1-123-620-00	ELECT	10MF	20%	35V
C205	1-123-902-00	ELECT	0.68MF	20%	50V
C206	1-136-163-00	FILM	0.068MF	5%	50V
C207	1-123-608-00	ELECT	0.22MF	20%	50V
C208	1-136-155-00	FILM	0.015MF	5%	50V
C209	1-136-163-00	FILM	0.068MF	5%	50V
C210	1-110-205-00	MYLAR	0.0068MF	5%	50V
C211	1-136-157-00	FILM	0.022MF	5%	50V
C212	1-110-197-00	MYLAR	0.0015MF	5%	50V
C213	1-110-203-00	MYLAR	0.0047MF	5%	50V
C214	1-130-469-00	MYLAR	680PF	5%	50V
C215	1-101-880-00	CERAMIC	47PF	5%	50V
C216	1-102-106-00	CERAMIC	100PF	10%	50V
C217	1-123-620-00	ELECT	10MF	20%	35V
C251	1-123-612-00	ELECT	2.2MF	20%	50V
C252	1-162-037-00	CERAMIC	100PF	5%	50V
C253	1-101-880-00	CERAMIC	47PF	5%	50V
C254	1-123-620-00	ELECT	10MF	20%	35V
C255	1-123-902-00	ELECT	0.68MF	20%	50V
C256	1-136-163-00	FILM	0.068MF	5%	50V
C257	1-123-608-00	ELECT	0.22MF	20%	50V
C258	1-136-155-00	FILM	0.015MF	5%	50V
C259	1-136-163-00	FILM	0.068MF	5%	50V
C260	1-110-205-00	MYLAR	0.0068MF	5%	50V
C261	1-136-157-00	FILM	0.022MF	5%	50V
C262	1-110-197-00	MYLAR	0.0015MF	5%	50V
C263	1-110-203-00	MYLAR	0.0047MF	5%	50V
C264	1-130-469-00	MYLAR	680PF	5%	50V
C265	1-101-880-00	CERAMIC	47PF	5%	50V
C266	1-102-106-00	CERAMIC	100PF	10%	50V
C267	1-123-620-00	ELECT	10MF	20%	35V
C301	1-123-357-00	ELECT	22MF	20%	35V
C302	1-161-315-00	CERAMIC	220PF	10%	50V
C303	1-102-963-00	CERAMIC	33PF	10%	50V
C304	1-123-332-00	ELECT	47MF	20%	16V
C306	1-123-357-00	ELECT	22MF	20%	50V
C307	1-136-163-00	FILM	0.068MF	5%	50V
C308	1-136-163-00	FILM	0.068MF	5%	50V
C309	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C310	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C311	1-161-043-00	CERAMIC	0.0022MF	30%	50V
C312	1-161-255-00	CERAMIC	4.7PF	10%	50V
C351	1-123-357-00	ELECT	22MF	20%	35V
C352	1-161-315-00	CERAMIC	220PF	10%	50V
C353	1-102-963-00	CERAMIC	33PF	10%	50V
C354	1-123-332-00	ELECT	47MF	20%	16V
C355	1-123-360-00	ELECT	100MF	20%	50V
C356	1-123-357-00	ELECT	22MF	20%	50V
C357	1-136-163-00	FILM	0.068MF	5%	50V
C358	1-136-163-00	FILM	0.068MF	5%	50V
C359	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C360	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C362	1-161-255-00	CERAMIC	4.7PF	10%	50V
C901	⚠1-161-744-00	CERAMIC	0.01MF		400V
C902	⚠1-161-744-00	(TA-AX230:AEP,G-AEP,UK/AX4060) .....CERAMIC	0.01MF		400V
C903	1-102-394-00	CERAMIC	0.01MF		250V
C904	1-124-362-00	ELECT	4700MF	20%	42V
C905	1-124-362-00	ELECT	4700MF	20%	42V
C906	1-123-356-00	ELECT	10MF	20%	50V
C907	1-123-307-00	ELECT	100MF	20%	6.3V
C908	1-123-308-00	ELECT	220MF	20%	6.3V
C909	1-123-307-00	ELECT	100MF	20%	6.3V
C910	1-123-357-00	ELECT	22MF	20%	50V
C911	1-123-821-00	ELECT	47MF	20%	16V
C912	1-123-821-00	ELECT	47MF	20%	16V
C913	1-123-332-00	ELECT	47MF	20%	16V
C914	1-123-332-00	ELECT	47MF	20%	16V
C915	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C916	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C917	1-161-494-00	(G-AEP)...CERAMIC	0.022MF	30%	25V
C918	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C919	1-136-163-00	(G-AEP)...FILM	0.068MF	5%	50V
C920	1-161-494-00	(G-AEP)...CERAMIC	0.022MF	30%	25V
C921	1-161-268-00	(G-AEP)...CERAMIC	56PF	5%	50V
C922	1-161-268-00	(G-AEP)...CERAMIC	56PF	5%	50V
C923	1-161-043-00	(G-AEP)...CERAMIC	0.0022MF	30%	50V
C924	1-161-043-00	(G-AEP)...CERAMIC	0.0022MF	30%	50V

CN901	⚠1-526-751-11	(TA-AX230:UK)...OUTLET, AC
CN901	⚠1-526-794-11	(TA-AX230:AEP,G-AEP/AX4060)..OUTLET, AC
CN902	⚠1-526-751-11	(TA-AX230:UK)...OUTLET, AC
CN902	⚠1-526-794-11	(TA-AX230:AEP,G-AEP/AX4060)..OUTLET, AC
CN903	⚠1-526-751-11	(TA-AX230:UK)...OUTLET, AC
CN903	⚠1-526-794-11	(TA-AX230:AEP,G-AEP/AX4060)..OUTLET, AC

ELECTRICAL PARTS

Ref.No.	Part No.	Description
CNJ101	1-507-788-00	JACK, PIN 4P
CNJ102	1-507-908-11	JACK, PIN 4P
CNJ103	1-507-908-11	JACK, PIN 4P
CNJ904	1-562-067-12	(TA-AX235)...SOCKET, CONNECTOR 5P
D301	8-719-107-94	DIODE 1SS202-1
D302	8-719-107-94	DIODE 1SS202-1
D351	8-719-107-94	DIODE 1SS202-1
D352	8-719-107-94	DIODE 1SS202-1
D901	8-719-200-07	DIODE 30D2-FC
D902	8-719-200-07	DIODE 30D2-FC
D903	8-719-200-07	DIODE 30D2-FC
D904	8-719-200-07	DIODE 30D2-FC
D905	8-719-991-21	DIODE EQA01-12R1
D906	8-719-991-21	DIODE EQA01-12R1
D907	8-719-200-77	DIODE 10E2N
D908	8-719-107-94	DIODE 1SS202-1
D909	8-719-107-94	DIODE 1SS202-1
D910	8-719-302-62	DIODE SEL2410GW-C
D911	8-719-302-62	DIODE SEL2410GW-C
D912	8-719-302-62	DIODE SEL2410GW-C
D913	8-719-302-62	DIODE SEL2410GW-C
D914	8-719-302-62	DIODE SEL2410GW-C
D915	8-719-938-03	DIODE LT2G5A
F901	⚠1-532-285-00	FUSE, TIME-LAG
F902	⚠1-532-285-00	(TA-AX230:AEP,G-AEP/AX4060) ...FUSE, TIME-LAG
IC101	8-759-106-61	IC UPC4570HA
IC201	8-759-106-61	IC UPC4570HA
IC202	8-759-106-61	IC UPC4570HA
IC301	8-749-941-50	IC STK4151V
IC901	8-759-101-23	IC UPC1237H
J301	1-563-250-11	JACK, LARGE TYPE
L301	*1-420-872-00	COIL, AIR CORE
L351	*1-420-872-00	COIL, AIR CORE
Q201	8-729-606-33	TRANSISTOR 2SC2603-F
Q202	8-729-606-33	TRANSISTOR 2SC2603-F
Q203	8-729-606-33	TRANSISTOR 2SC2603-F
Q204	8-729-606-33	TRANSISTOR 2SC2603-F
Q205	8-729-606-33	TRANSISTOR 2SC2603-F
Q251	8-729-606-33	TRANSISTOR 2SC2603-F
Q252	8-729-606-33	TRANSISTOR 2SC2603-F
Q253	8-729-606-33	TRANSISTOR 2SC2603-F
Q254	8-729-606-33	TRANSISTOR 2SC2603-F
Q255	8-729-606-33	TRANSISTOR 2SC2603-F
Q301	8-729-108-05	TRANSISTOR 2SC1841-PA
Q351	8-729-108-05	TRANSISTOR 2SC1841-PA
Q901	8-729-900-63	TRANSISTOR DTA124ES

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R101	1-247-712-11	(G-AEP)...CARBON	820	5%	1/4W
R102	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R103	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R104	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R105	1-247-708-11	CARBON	470	5%	1/4W
R106	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R107	1-249-469-11	CARBON	100K	5%	1/4W
R108	1-249-461-85	(AEP,UK,AUS)...CARBON	330	5%	1/4W
R108	1-247-712-11	(G-AEP).....CARBON	820	5%	1/4W
R109	1-249-469-11	CARBON	100K	5%	1/4W
R110	1-247-712-11	CARBON	820	5%	1/4W
R111	1-246-539-00	CARBON	560K	5%	1/4W
R112	1-249-465-11	CARBON	47K	5%	1/4W
R113	1-249-469-11	CARBON	100K	5%	1/4W
R114	1-247-704-11	CARBON	220	5%	1/4W
R115	1-246-545-00	CARBON	1M	5%	1/4W
R116	1-246-545-00	CARBON	1M	5%	1/4W
R151	1-247-712-11	(G-AEP)...CARBON	820	5%	1/4W
R152	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R153	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R154	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R155	1-247-708-11	CARBON	470	5%	1/4W
R156	1-247-708-11	(G-AEP)...CARBON	470	5%	1/4W
R157	1-249-469-11	CARBON	100K	5%	1/4W
R158	1-249-461-85	(AEP,UK,AUS)...CARBON	330	5%	1/4W
R158	1-247-712-11	(G-AEP).....CARBON	820	5%	1/4W
R159	1-249-469-11	CARBON	100K	5%	1/4W
R160	1-247-712-11	CARBON	820	5%	1/4W
R161	1-246-539-00	CARBON	560K	5%	1/4W
R162	1-249-465-11	CARBON	47K	5%	1/4W
R163	1-249-469-11	CARBON	100K	5%	1/4W
R164	1-247-704-11	CARBON	220	5%	1/4W
R165	1-246-545-00	CARBON	1M	5%	1/4W
R166	1-246-545-00	CARBON	1M	5%	1/4W
R201	1-249-469-11	CARBON	100K	5%	1/4W
R202	1-247-713-11	CARBON	1K	5%	1/4W
R203	1-249-469-11	CARBON	100K	5%	1/4W
R204	1-247-145-00	CARBON	3.9K	5%	1/4W
R205	1-247-833-00	CARBON	1.2K	5%	1/6W
R206	1-249-437-11	CARBON	47K	5%	1/6W
R207	1-247-851-00	CARBON	6.8K	5%	1/6W
R208	1-247-821-00	CARBON	390	5%	1/6W
R209	1-247-833-00	CARBON	1.2K	5%	1/6W
R210	1-249-437-11	CARBON	47K	5%	1/6W
R211	1-247-851-00	CARBON	6.8K	5%	1/6W
R212	1-247-821-00	CARBON	390	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R213	1-247-833-00	CARBON	1.2K	5%	1/6W
R214	1-249-437-11	CARBON	47K	5%	1/6W
R215	1-247-851-00	CARBON	6.8K	5%	1/6W
R216	1-247-821-00	CARBON	390	5%	1/6W
R217	1-247-833-00	CARBON	1.2K	5%	1/6W
R218	1-249-437-11	CARBON	47K	5%	1/6W
R219	1-247-851-00	CARBON	6.8K	5%	1/6W
R220	1-247-821-00	CARBON	390	5%	1/6W
R221	1-247-833-00	CARBON	1.2K	5%	1/6W
R222	1-249-437-11	CARBON	47K	5%	1/6W
R223	1-247-851-00	CARBON	6.8K	5%	1/6W
R224	1-247-821-00	CARBON	390	5%	1/6W
R225	1-247-845-00	CARBON	3.9K	5%	1/6W
R226	1-249-441-11	CARBON	100K	5%	1/6W
R227	1-249-419-11	CARBON	1.5K	5%	1/6W
R228	1-249-469-11	CARBON	100K	5%	1/4W
R251	1-249-469-11	CARBON	100K	5%	1/4W
R252	1-247-713-11	CARBON	1K	5%	1/4W
R253	1-249-469-11	CARBON	100K	5%	1/4W
R254	1-247-145-00	CARBON	3.9K	5%	1/4W
R255	1-247-833-00	CARBON	1.2K	5%	1/6W
R256	1-249-437-11	CARBON	47K	5%	1/6W
R257	1-247-851-00	CARBON	6.8K	5%	1/6W
R258	1-247-821-00	CARBON	390	5%	1/6W
R259	1-247-833-00	CARBON	1.2K	5%	1/6W
R260	1-249-437-11	CARBON	47K	5%	1/6W
R261	1-247-851-00	CARBON	6.8K	5%	1/6W
R262	1-247-821-00	CARBON	390	5%	1/6W
R263	1-247-833-00	CARBON	1.2K	5%	1/6W
R264	1-249-437-11	CARBON	47K	5%	1/6W
R265	1-247-851-00	CARBON	6.8K	5%	1/6W
R266	1-247-821-00	CARBON	390	5%	1/6W
R267	1-247-833-00	CARBON	1.2K	5%	1/6W
R268	1-249-437-11	CARBON	47K	5%	1/6W
R269	1-247-851-00	CARBON	6.8K	5%	1/6W
R270	1-247-821-00	CARBON	390	5%	1/6W
R271	1-247-833-00	CARBON	1.2K	5%	1/6W
R272	1-249-437-11	CARBON	47K	5%	1/6W
R273	1-247-851-00	CARBON	6.8K	5%	1/6W
R274	1-247-821-00	CARBON	390	5%	1/6W
R275	1-247-845-00	CARBON	3.9K	5%	1/6W
R276	1-249-441-11	CARBON	100K	5%	1/6W
R277	1-249-419-11	CARBON	1.5K	5%	1/6W
R278	1-249-469-11	CARBON	100K	5%	1/4W
R301	1-247-713-11	CARBON	1K	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R302	1-247-173-00	CARBON	56K	5%	1/4W
R303	1-247-125-00	CARBON	560	5%	1/4W
R304	1-247-252-00	CARBON	3.3K	5%	1/2W
R305	1-247-252-00	CARBON	3.3K	5%	1/2W
R306	1-247-173-00	CARBON	56K	5%	1/4W
R307	1-247-125-00	CARBON	560	5%	1/4W
R308	1-217-151-00	RES, METAL PLATE 0.22			
R309	1-247-192-00	CARBON	10	5%	1/2W
R310	1-247-192-00	CARBON	10	5%	1/2W
R311	1-249-459-11	CARBON	12K	5%	1/4W
R312	1-249-465-11	CARBON	47K	5%	1/4W
R313	1-247-745-11	CARBON	330	5%	1/2W
R314	1-247-192-00	(G-AEP)...CARBON	10	5%	1/2W
R351	1-247-713-11	CARBON	1K	5%	1/4W
R352	1-247-173-00	CARBON	56K	5%	1/4W
R353	1-247-125-00	CARBON	560	5%	1/4W
R354	1-247-252-00	CARBON	3.3K	5%	1/2W
R355	1-247-252-00	CARBON	3.3K	5%	1/2W
R356	1-247-173-00	CARBON	56K	5%	1/4W
R357	1-247-125-00	CARBON	560	5%	1/4W
R358	1-217-151-00	RES, METAL PLATE 0.22			
R359	1-247-192-00	CARBON	10	5%	1/2W
R360	1-247-192-00	CARBON	10	5%	1/2W
R361	1-249-459-11	CARBON	12K	5%	1/4W
R362	1-249-465-11	CARBON	47K	5%	1/4W
R363	1-247-745-11	CARBON	330	5%	1/2W
R364	1-247-192-00	(G-AEP)...CARBON	10	5%	1/2W
R365	⚠1-247-700-11	CARBON	100	5%	1/4W F
R901	⚠1-217-469-00	(TA-AX235)...FUSE	1	5%	1W F
R902	⚠1-217-469-00	(TA-AX235)...FUSE	1	5%	1W F
R903	⚠1-217-469-00	(TA-AX235)...FUSE	1	5%	1W F
R904	⚠1-206-644-00	METAL OXIDE	150	5%	2W F
R905	⚠1-206-646-11	METAL OXIDE	180	5%	2W F
R906	1-247-708-11	CARBON	470	5%	1/4W
R907	1-247-125-00	CARBON	560	5%	1/4W
R908	1-247-264-00	CARBON	10K	5%	1/2W
R909	⚠1-206-658-00	METAL OXIDE	560	5%	2W F
R910	1-247-173-00	CARBON	56K	5%	1/4W
R911	1-249-469-11	CARBON	100K	5%	1/4W
R912	1-247-725-11	CARBON	10K	5%	1/4W
R913	1-247-240-00	CARBON	1K	5%	1/2W
R914	1-247-240-00	CARBON	1K	5%	1/2W
R915	1-249-459-11	CARBON	12K	5%	1/4W
R916	⚠1-206-646-11	METAL OXIDE	180	5%	2W F
R917	⚠1-206-644-00	METAL OXIDE	150	5%	2W F

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R918	1-247-109-00	CARBON	120	5%	1/4W
R919	1-247-725-11	CARBON	10K	5%	1/4W
RV201	1-237-172-11	RES, VAR, SLIDE 250K/250K (100Hz)			
RV202	1-237-172-11	RES, VAR, SLIDE 250K/250K (400Hz)			
RV203	1-237-172-11	RES, VAR, SLIDE 250K/250K (1kHz)			
RV204	1-237-172-11	RES, VAR, SLIDE 250K/250K (4kHz)			
RV205	1-237-172-11	RES, VAR, SLIDE 250K/250K (12kHz)			
RV301	1-237-203-11	RES, VAR, SLIDE 250K/250K (BALANCE)			
RV302	1-237-202-11	RES, VAR, SLIDE 100K/100K (VOLUME)			
RY901	1-515-533-11	RELAY			
S101	1-570-626-11	SWITCH, PUSH (5 KEY) (PHONO/TUNER/CD/VIDIO/TAPE)			
S901	⚠1-553-318-51	(TA-AX230:AUS/AX235) ...SWITCH, PUSH (AC POWER)(1 KEY)			
S901	⚠1-554-685-11	(TA-AX230:AEP,G-AEP,UK/AX4060) ...SWITCH, PUSH (AC POWER)(1 KEY)			
T1	⚠1-448-479-11	(TA-AX230/AX4060)...TRANSFORMER, POWER			
T1	⚠1-448-480-11	(TA-AX235).....TRANSFORMER, POWER			
TM301	1-536-705-00	TERMINAL BOARD (SP)			

ACCESSORY & PACKING MATERIAL

Part No.	Description
3-701-630-00	BAG, POLYETHYLENE
3-703-713-41	STICKER, SONY SYMBOL (10)
3-765-306-11	(TA-AX230:AEP,AUX,UK)...MANUAL, INSTRUCTION
3-765-306-41	(TA-AX230:AEP,G-AEP)....MANUAL, INSTRUCTION
3-765-412-61	(TA-AX4060).....MANUAL, INSTRUCTION
4-876-352-00	SHEET, PROTECTION
4-904-442-01	CUSHION (LEFT), LOWER
4-904-443-01	CUSHION (RIGHT), LOWER
4-904-444-01	CUSHION (LEFT), UPPER
4-904-445-01	CUSHION (RIGHT), UPPER

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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